

**REMARKS**

This is responsive to the Final Office Action mailed April 3, 2009 ("Office Action").

**Claim Rejections – 35 U.S.C. §102**

Claims 1-5, 16-20, and 22-24 stand rejected under 35 U.S.C. §102(b) as being anticipated by Yoshizaki et al. (U.S. Patent No. 5,582,805).

Independent claim 1 recites a method for heating a catalyst bed for startup comprising providing a catalyst bed having an upstream face and a downstream face; providing an electrical heating element positioned along one face of the catalyst bed; passing a small flow of reactants through the electrical heating element and catalyst bed; and heating the electrical heating element to initiate an exothermic reaction at the face of the catalyst bed, wherein the heat of reaction propagates throughout the catalyst bed thereby heating the catalyst bed for start-up.

Independent claim 16 recites a method for heating a catalyst bed comprising providing a catalyst bed in communication with an electrical heating element wherein the electrical heating element is a face heater; and heating the electrical heating element so as to maintain the desired temperature of the catalyst bed.

Independent claim 22 recites a method for heating a catalyst bed to a desired temperature, comprising positioning an electrical heating element upstream of the catalyst bed wherein the electrical heating element is a face heater; and passing a fluid across the electrical heating element and through the catalyst bed, wherein the catalyst bed is heated to the desired temperature.

Yoshizaki does not anticipate the methods for heating a catalyst bed of claims 1-5, 16-20, and 22-24 of the present invention. In addition to the arguments previously presented, Applicants respectfully disagree that Yoshizaki discloses "an

electrical heating element along one face as a face heater" (Office Action, p. 7). The following is an excerpt from Yoshizaki:

FIG. 15 shows a catalytic converter according to an eighth embodiment of the present invention. This embodiment employs a metallic honeycomb catalyst carrier 44 similar to the carrier 15. An upstream or down stream end face of the carrier 44 is provided with a circular electrically conductive heater 45 made of, for example, SiC. When energized, the heater 45 provides hot spots to burn combustible components such as HC and CO contained in exhaust, to thereby increase the temperature of the carrier 44. The circular shape of the heater 45 corresponds to an annular cross-sectional area of the carrier 44 where the flow rate of the exhaust is largest.

The heater 45 of the eighth embodiment may have any other shape. FIG. 16 shows a modification of the eighth embodiment, employing a winding heater 46. The heater 46 uniformly heats the end face of the carrier 44, to promote reactions over the carrier 44 among incompletely burnt components contained in exhaust.

(Col. 15, lines 1-18) The Yoshizaki "electrical heating element" is a "circular electrically conductive heater." (Col. 15, line 5). It may also be a "winding heater."

(Col. 15, line 15) Yoshizaki does not teach or suggest a face heater as in the present invention.

Because Yoshizaki fails to teach one or more of the recited elements of claims 1-5, 16-20, and 22-24, reconsideration and withdrawal of the rejection of claims 1-5, 16-20, and 22-24 under 35 U.S.C. §102(b) as being anticipated by Yoshizaki is respectfully requested.

Claims 16, 17, and 20 stand rejected under 35 U.S.C. §102(b) as being anticipated by Brunson et al. (U.S. Patent No. 5,512,251).

Independent claim 16 recites a method for heating a catalyst bed comprising providing a catalyst bed in communication with an electrical heating element wherein the electrical heating element is a face heater; and heating the electrical heating element so as to maintain the desired temperature of the catalyst bed. Brunson

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does not anticipate a method for heating a catalyst bed comprising: (1) providing a catalyst bed in communication with an electrical heating element wherein the electrical heating element is a face heater and (2) heating the electrical heating element so as to maintain the desired temperature of the catalyst bed.

In addition to the arguments previously presented, Brunson does not teach or suggest maintaining the desired temperature of the catalyst bed as in claim 16 of the present invention. Because Brunson fails to teach one or more of the recited elements of claim 16, reconsideration and withdrawal of the rejection of claims 16, 17, and 20 under 35 U.S.C. §102(b) as being anticipated by Brunson is respectfully requested.

#### **Claim Rejections – 35 U.S.C. §103**

Claims 13-21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bayer et al. (U.S. Patent No. 5,562,885) in view of Helmers (U.S. Patent No. 2,443,423).

Independent claim 13 recites a method for heating a catalyst bed, comprising: providing an electrical heating element positioned within a cooling coil located substantially within the catalyst bed wherein the electrical heating element is a face heater; and heating the electrical heating element thereby heating the catalyst bed to a desired temperature.

Independent claim 16 recites a method for heating a catalyst bed comprising providing a catalyst bed in communication with an electrical heating element wherein the electrical heating element is a face heater; and heating the electrical heating element so as to maintain the desired temperature of the catalyst bed.

Independent claim 22 recites a method for heating a catalyst bed to a desired temperature, comprising positioning an electrical heating element upstream of the catalyst bed wherein the electrical heating element is a face heater; and passing a

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fluid across the electrical heating element and through the catalyst bed, wherein the catalyst bed is heated to the desired temperature.

According to the Examiner, “[i]t has been held that obviousness may sometimes be based on the common knowledge of persons skilled in the art without relying on a specific suggestion in a particular reference.” (Office Action, p. 5) However, according to the MPEP, rejections based on common knowledge should be judiciously applied. MPEP 2144.03. As a result, Applicants respectfully request that the Examiner provide the explicit basis for the common knowledge rejection.

As a result, claims 13-21 are not unpatentable over Bayer in view of Helmers. Reconsideration and withdrawal of this rejection is respectfully requested.

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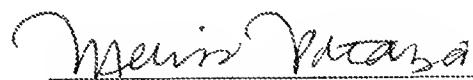
### Conclusion

All of the stated grounds of objection and rejection are believed to have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

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Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully submitted,



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September 3, 2009

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